

las vegas

- Gravity **13.6 BLG**
- ABV **5.6 %**
- IBU **46**
- SRM **11**
- Style **California Common Beer**

Batch size

- Expected quantity of finished beer **12 liter(s)**
- Trub loss **5 %**
- Size with trub loss **12.6 liter(s)**
- Boil time **60 min**
- Evaporation rate **10 %/h**
- Boil size **15.2 liter(s)**

Mash information

- Mash efficiency **75 %**
- Liquor-to-grist ratio **3 liter(s) / kg**
- Mash size **10.2 liter(s)**
- Total mash volume **13.6 liter(s)**

Steps

- Temp **62 C**, Time **40 min**
- Temp **71 C**, Time **35 min**
- Temp **78 C**, Time **10 min**

Mash step by step

- Heat up **10.2 liter(s)** of strike water to **69C**
- Add grains
- Keep mash **40 min** at **62C**
- Keep mash **35 min** at **71C**
- Keep mash **10 min** at **78C**
- Sparge using **8.4 liter(s)** of **76C** water or to achieve **15.2 liter(s)** of wort

Fermentables

| Type | Name | Amount | Yield | EBC |
|-------|------------------------|-----------------|--------|-----|
| Grain | Simpsons - Maris Otter | 1.25 kg (36.8%) | 81 % | 6 |
| Grain | Briess - Pilsen Malt | 1 kg (29.4%) | 80.5 % | 2 |
| Grain | crystal wheat | 0.25 kg (7.4%) | 70 % | 55 |
| Grain | Monachijski | 0.25 kg (7.4%) | 80 % | 16 |
| Grain | roasted rye | 0.25 kg (7.4%) | 67 % | 190 |
| Grain | Płatki owsiane | 0.4 kg (11.8%) | 60 % | 3 |

Hops

| Use for | Name | Amount | Time | Alpha acid |
|-----------|------------|--------|--------|------------|
| Boil | Centennial | 10 g | 60 min | 9.5 % |
| Boil | Amarillo | 10 g | 30 min | 8.9 % |
| Boil | Centennial | 10 g | 15 min | 9.5 % |
| Boil | Amarillo | 10 g | 2 min | 8.9 % |
| Whirlpool | Amarillo | 10 g | 15 min | 8.9 % |
| Whirlpool | Centennial | 10 g | 15 min | 9.5 % |

Yeasts

| Name | Type | Form | Amount | Laboratory |
|---------------------------------------|-------------|-------------|---------------|-------------------|
| Mangrove Jack's M54 Californian Lager | Lager | Dry | 10 g | Mangrove Jack's |

Extras

| Type | Name | Amount | Use for | Time |
|-------------|-------------|---------------|----------------|-------------|
| Fining | tabletko | 2.5 g | Boil | 10 min |